

In the Claims:

1 **1.** (original) Flow-mechanically effective surface of a device
2 moving in a fluid, especially a flying machine, especially
3 a lifting surface of a flying machine, whereby the surface
4 (1) comprises an elastic axis (EA) extending in the span
5 direction (6) of the surface (1) and an adjustable control
6 surface (3), characterized in that the surface (1) is
7 elastically deformable in a bending direction and/or in a
8 direction about the elastic axis (EA) dependent on the
9 adjustment of the control surface (3) while changing the
10 induced flow-mechanical resistance, and that a control
11 and/or regulating arrangement (10, 11, 12; 13, 14, 15) for
12 the adjustment of the control surface (3) in the sense of
13 a minimization of the induced flow-mechanical resistance of
14 the surface (1) is provided.

1 **2.** (original) Flow-mechanically effective surface according to
2 claim 1, characterized in that the control surface (3a; 3b;
3 3c; 3d; 3e; 3f) is arranged offset by a prescribed spacing
4 distance relative to the elastic axis (EA).

Claims 3 to 18 (canceled).

- 1 **19.** (new) Flow-mechanically effective surface according to
2 claim 1, characterized in that the control surface (3a; 3b;
3 3c; 3d; 3e; 3f) is arranged rotatably supported about a
4 rotation axis (4), and that the rotation axis (4) or at
5 least a component thereof extends in the direction of the
6 elastic axis (EA).
- 1 **20.** (new) Flow-mechanically effective surface according to
2 claim 1, characterized in that the control surface (3) is
3 arranged by a prescribed spacing distance behind the
4 elastic axis (EA).
- 1 **21.** (new) Flow-mechanically effective surface according to
2 claim 1, characterized in that the control surface (3a; 3b;
3 3c; 3d; 3e) is arranged by a prescribed spacing distance in
4 front of the elastic axis (EA).
- 1 **22.** (new) Flow-mechanically effective surface according to
2 claim 1, characterized in that the control surface (3b; 3d)
3 is arranged within the wing span.
- 1 **23.** (new) Flow-mechanically effective surface according to
2 claim 1, characterized in that the control surface (3a; 3c;
3 3e; 3f) is arranged outside of the wing span.
- 1 **24.** (new) Flow-mechanically effective surface according to
2 claim 1, characterized in that the control surface (3a; 3b)
3 is arranged behind the leading edge of the surface (1).

1 **25.** (new) Flow-mechanically effective surface according to
2 claim 1, characterized in that the control surface (3c; 3d)
3 is arranged in front of the leading edge of the surface
4 (1).

1 **26.** (new) Flow-mechanically effective surface according to
2 claim 1, characterized in that the control surface (3c; 3e)
3 is provided in addition to a wing tip surface (winglet) (2)
4 at the surface tip.

1 **27.** (new) Flow-mechanically effective surface according to
2 claim 1, characterized in that the control surface (3f)
3 itself is embodied as a wing tip surface.

1 **28.** (new) Flow-mechanically effective surface according to
2 claim 27, characterized in that the rotation axis (4) of
3 the control surface (3f) forming the wing tip surface (2)
4 extends obliquely relative to the direction of the elastic
5 axis (EA).

1 **29.** (new) Flow-mechanically effective surface according to
2 claim 27, characterized that the surface (1) is a lifting
3 wing of a flying machine, whereby the wing tip surface (2)
4 continues the lifting wing at its tip obliquely or
5 vertically upwardly.

1 **30.** (new) Flow-mechanically effective surface according to
2 claim 26, characterized that the surface (1) is a lifting
3 wing of a flying machine, whereby the wing tip surface (2)
4 continues the lifting wing at its tip obliquely or
5 vertically upwardly.

1 **31.** (new) Flow-mechanically effective surface according to
2 claim 26, characterized in that the surface (1) is a
3 lifting wing of a flying machine, whereby the wing tip
4 surface (2) continues the lifting wing obliquely or
5 vertically upwardly and the control surface (3a; 3b; 3c;
6 3e) continues the lifting wing in its direction or
7 obliquely downwardly.

1 **32.** (new) Flow-mechanically effective surface according to
2 claim 1, characterized in that the surface (1) is the
3 lifting surface of an aircraft.

1 **33.** (new) Flow-mechanically effective surface according to
2 claim 1, characterized in that the surface (1) is the
3 lifting surface of a rotary wing aircraft.

1 **34.** (new) Flow-mechanically effective surface according to
2 claim 1, characterized in that there is provided a control
3 arrangement (10, 11, 12) for the generation of an actuating
4 signal for the control surface (3) from data relating to
5 the aircraft loading and the flight condition, with
6 utilization of stored nominal value data.

1 **35.** (new) Flow-mechanically effective surface according to
2 claim 1, characterized in that there is provided a
3 regulating arrangement (13, 14, 15) for the generation of
4 an actuating signal for the control surface (3) from
5 comparison of measured data representing the actual elastic
6 deformation of the flow-mechanically effective surface (1)
7 with nominal data representing a nominal deformation of the
8 flow-mechanically effective surface (1) prescribed for the
9 aircraft loading and the flight condition.

[REMARKS FOLLOW ON NEXT PAGE]